

Appln. No. 09/893,005
Amd. dated June 17, 2004
Reply to Office Action of March 24, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (Cancelled).

11(Currently amended). A grown-up transgenic plant which is obtained by (i) introducing a DNA sequence, which encodes a cytokine of a human or mammalian source and has an ~~additional~~ a constitutive regulatory sequence, inducible regulatory sequence, or tissue specific regulatory sequence, into a plant protoplast, plant cell, plant tissue, calli, or a plant; (ii) growing or regenerating the transformed plant protoplast, plant cell, plant tissue, calli, or plant into a grown-up transgenic plant while allowing expression of said DNA within the grown-up transgenic plant to form said cytokine in an amount of 0.1 ng to one milligram per one kilogram by fresh weight of the grown-up transgenic plant that is effective to prevent and/or treat humans or mammals from diseases which can be prevented and/or treated with said cytokine when the grown-up transgenic plant, which is edible to humans and mammals, is ingested by said humans or said mammals; and (iii) harvesting the grown-up transgenic plant.

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12(Previously presented). The grown-up transgenic plant of claim 11, wherein said cytokine is one or more human or mammalian cytokines.

13(Previously presented). The grown-up transgenic plant of claim 12, wherein the one or more human or mammalian cytokines are selected from the group consisting of interferons, interleukins, hematopoietic factors, and growth factors.

14(Previously presented). The grown-up transgenic plant of claim 11, wherein the mammalian source is bovine, porcine, mouse, or rat with the proviso that the transgenic plant is ingested by a mammal belonging to the same family as the mammalian source used.

15(Previously presented). The grown-up transgenic plant of claim 11, which can be ingested by humans without cooking or heating.

16(Previously presented). The grown-up transgenic plant of claim 11, wherein said plant is a plant of a family selected from the group consisting of *Solanaceae*, *Apiaceae*, *Asteraceae*, *Brassicaceae*, *Cucurbitaceae*, *Rosaceae*, *Vitaceae*, *Ericaceae*, *Caricaceae*, *Fabaceae*, *Juglandaceae*, and *Chenopodiaceae*.

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Claim 17 (Cancelled).

18(Previously presented). An isolated tissue of the grown-up transgenic plant of claim 11, which is selected from the group consisting of leaf, stem, root, fruit, peel, bud, petal, and a combination thereof, wherein said isolated tissue comprises the cytokine expressed in said transgenic plant.

19(Previously presented). The isolated tissue of claim 18, to which trehalose has been added.

20(Currently amended). A food composition comprising the grown-up transgenic plant of claim 11 and an edible material, the grown-up transgenic plant is in a cut, peeled, pulverized, squeezed, or extracted form comprising an effective amount of the expressed cytokine.

21(Previously presented). The food composition of claim 20, which is further supplemented with trehalose.

Claims 22-31 (Cancelled).

32(Previously presented). The grown-up transgenic plant of claim 11, which can be ingested by mammals without cooking or heating.